

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H01L23/64 H01L23/498

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| X          | <p>WO 02/054421 A (CHAKRAVORTY KISHORE K ; RODRIGUEZ JORGE P (US); BROWN KENNETH M (US);) 11 July 2002 (2002-07-11)<br/> page 1, line 10 - page 2, line 29<br/> page 4, lines 1-28; figure 3<br/> page 5, line 28 - page 6, line 15; figure 4<br/> pages 813-23<br/> page 10, line 24 - page 12, line 2; figure 12<br/> page 12, lines 31-37<br/> page 13, lines 27-31<br/> page 14, lines 10-22<br/> page 15, line 27 - page 16, line 31;<br/> figure 16</p> <p style="text-align: center;">-----<br/>-/--</p> | 1-9                   |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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\* & \* document member of the same patent family

Date of the actual completion of the international search

13 September 2004

Date of mailing of the international search report

21/09/2004

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| A          | <p>US 6 411 494 B1 (WATT MICHAEL MAN-KUEN)<br/> 25 June 2002 (2002-06-25)<br/> column 1, line 6 - column 2, line 31<br/> column 5, line 30 - column 6, line 53;<br/> figure 1<br/> column 7, line 65 - column 8, line 34;<br/> figures 4a-4c<br/> column 8, line 63 - column 9, line 4<br/> column 9, lines 29-39; figure 7a<br/> column 9, line 58 - column 14, line 65;<br/> figures 8-11</p> <p>-----</p> | 1-9                   |
| A          | <p>US 2003/024732 A1 (NINOMIYA RYOJI)<br/> 6 February 2003 (2003-02-06)<br/> paragraphs '0008!', '0013!<br/> paragraphs '0040!' - '0045!; figures 3-5<br/> paragraphs '0066!' - '0068!', '0073!;<br/> figure 16</p> <p>-----</p>   | 1-9                   |
| A          | <p>US 4 494 172 A (LEARY BURTON ET AL)<br/> 15 January 1985 (1985-01-15)<br/> column 4, lines 18-59; figures 3-5</p> <p>-----</p>  | 1-9                   |
| A          | <p>US 4 945 399 A (BROWN MICHAEL B ET AL)<br/> 31 July 1990 (1990-07-31)<br/> column 1, lines 15-54<br/> column 3, lines 3-62; figure 2<br/> column 3, line 64 - column 4, line 42;<br/> figure 3</p> <p>-----</p>   | 1-9                   |

## INTERNATIONAL SEARCH REPORT

Information on patent family members

national Application No

T/IB2004/000992

| Patent document<br>cited in search report |    | Publication<br>date | Patent family<br>member(s)  | Publication<br>date  |
|---|----|---------------------|---|--|
| WO 02054421                               | A  | 11-07-2002          | US 2002085334 A1<br>CN 1484840 T<br>DE 10197124 T0<br>EP 1384237 A2<br>GB 2384912 A<br>WO 02054421 A2 | 04-07-2002<br>24-03-2004<br>13-11-2003<br>28-01-2004<br>06-08-2003<br>11-07-2002 |
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| US 4945399                                | A  | 31-07-1990          | DE 3782714 D1<br>DE 3782714 T2<br>EP 0262493 A2<br>JP 1808987 C<br>JP 5019983 B<br>JP 63086554 A      | 24-12-1992<br>09-06-1993<br>06-04-1988<br>10-12-1993<br>18-03-1993<br>16-04-1988 |